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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/374,374	08/13/1999	DANIEL M. COFFMAN	Y0999-276-(8)	3661

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EXAMINER

ARMSTRONG, ANGELA A

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/374,374

Applicant(s)

COFFMAN ET AL.

Examiner

Angela A Armstrong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. In view of the Appeal Brief filed on December 22, 2003, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US Patent No. 5,748,974) in view of Cote et al (US Patent No. 6,125,347).

Johnson discloses a multi-modal natural language interface for cross-application tasks which interprets user requests combining natural language input from the user with information

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selected from a current application and sends the request in the proper form to an appropriate auxiliary application for processing.

Regarding claim 1, at col. 3, line 63 continuing to col. 4, line 20, Johnson teaches the system sends the output of a speech recognizer and non-speech input received by a screen manager to a dispatcher. Based on the output of the natural language processor, the dispatcher invokes the application manager to determine which application should process the request, which reads on "presenting a command associated with an application to a dialog manager, the application associated with the command being unknown to the dialog manager."

Johnson fails to specifically disclose, "the application associated with the command being one of a plurality of active applications." However, implementation of a computer system, which allows a user to interact with a plurality of simultaneously running applications using natural language, was well known in the art.

In a similar field of endeavor, Cote discloses a system for controlling multiple user application programs by spoken input, which provides a speech recognition program working in conjunction with an operating system which provides multi-tasking capability and provides for implementation of a windowing system which facilitates the direction of user input to the various user application programs which are running (col. 3, lines 12-17; col. 4, lines 36-39).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to allow for the presented command to be associated with one of a plurality of active applications, as suggested by Cote, for the purpose of allowing the user the convenience of accessing the processing of all applications to have a request processed automatically, without the user having to manually access any of the applications.

Johnson fails to specifically disclose “the dialog manager determining current context of the command by reviewing a multi-modal history of events.” However, determining current context of user input responses by reviewing a history of events was well known in the art.

Cote teaches the system maintains a database for the application programs that are running which allows the system to maintain an effective context for the user programs (col. 1, lines 47-49) and the system creates text events which are used to record information about all types of input events or application events (col. 7, line 9 to col. 9, line 53).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to implement determining current context of user input responses by reviewing a history of events as suggested by Cote, for the purpose of providing an improved system for controlling multiple user application programs by spoken input, as also suggested by Cote (col. 1, lines 32-34).

Additionally, at col. 4, lines 29-52, Johnson teaches the application manager determines which application is applicable to the user input, sends a request to a code generator for the application, and generates the application program code interface code required to access the information, which reads on “determining at least one method responsive to the command based on the current context.”

Additionally, at col. 4, lines 48-52, Johnson discloses a response generator that generates a response appropriate to the nature of the request submitted by the user and the current application, which reads on “executing the at least one method responsive to the command associated with the application.”

Additionally, at col. 4, line 17-53 and col. 5, line 23-29, Johnson teaches “changing dialog focus,” because the system ascertains that a different application should process the user request, and utilizes the different application’s resources to process the request, since the procedures to access a new or different application requires the system to access or focus on the new or different application. The system of Johnson performs this processing without requiring the user to perform the task of accessing the application, but the application is indeed accessed and opened to allow for the processing of the user’s request.

Regarding claim 2, Johnson and Cote teach everything as claimed in claim 1.

Additionally, at col. 3, lines 33-42, Johnson teaches the multi-modal interface is linked to the applications and allows for combining input from various modalities, which reads on “employing at least one multi-modal device for presenting the command.”

Regarding claim 3, the combination of Johnson and Cote teaches everything as claimed in claim 2. Additionally, at col. 3, lines 37-42, Johnson discloses the input means can be via speech, typed or handwritten and includes point-and-click, touch and keyboard inputs, which reads on “multi-modal device is a computer.”

Regarding claim 4, the combination of Johnson and Cote teaches everything as claimed in claim 1. Johnson does not specifically teach providing a linked list of all events in the multi-modal history. However, providing a linked history of dialog between a user and a system was well known in the art.

Cote teaches the system creates text events, which are used to record information about all types of input events or application events (col. 7, line 9 to col. 9, line 53), which reads on “linked list of all events.”

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to implement a linked list of events in the multi-modal history, as suggested by Cote, for the purpose of removing the ambiguity of a users input query and for providing an improved system for controlling multiple user application programs by spoken input, as also suggested by Cote (col. 1, lines 32-34).

Regarding claim 5, the combination of Johnson and Cote teach everything as claimed in claim 4. Johnson does not specifically teach events in a multi-modal history include events linked by time, type, transaction, class or dialog focus. However, providing linked history events of a dialog between a user and a natural language system was well known.

Cote teaches the system creates text events, which are used to record information about all types of input events or application events, and the events or records have chronological and/or hierarchical relationships (col. 7, line 9 to col. 9, line 53).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to implement a linked list of events in the multi-modal history, as suggested by Cote, for the purpose of removing the ambiguity of a users input query and for providing an improved system for controlling multiple user application programs by spoken input, as also suggested by Cote (col. 1, lines 32-34).

Regarding claim 6, the combination of Johnson and Cote teach everything as claimed in claim 1. Additionally, at col. 5, line 55 continuing to col. 6, line 19, Johnson teaches referencing a concept/application table in which for a given input the application manager finds all concepts in the representation and determines each application registered with every concept in the representation to create an application set. The semantic representation is sent to the applications

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code generator to allow the application to act on the code and retrieve the requested data, which reads on “referencing all active applications using a component control to determine the at least one method which is appropriate.”

Regarding claim 7, the combination of Johnson and Cote teach everything as claimed in claim 1. Additionally, at col. 6, lines 20-40, Johnson teaches the semantic representation of the users input is sent to the applications code generator to allow the application to act on the code and retrieve the requested data, which reads on “the command is presented in a formal language such that a plurality of human utterances represent an action to be taken.”

Regarding claim 8, the combination of Johnson and Cote teaches everything as claimed in claim 1. Additionally, at col. 3, lines 60-62, Johnson teaches maintaining item in focus information, which reads on “maintaining a current dialog focus.” At col. 5, line 61 continuing to col. 6, line 9, Johnson teaches concept/application table which reads on “a list of expected responses to provide a reference for determining the current context.”

Regarding claim 9, the combination of Johnson and Cote teach everything as claimed in claim 1. Additionally, at col. 4, lines 9-17 and col. 5, lines 9-11, Johnson teaches the natural language processor interacts with the user to clarify missing information or ambiguities, which reads on “querying a user for one of information needed to resolve the current context and information needed to take an appropriate action.

Regarding claim 10, at col. 2, line 62 continuing to col. 3, line 16, Johnson teaches the hardware environment used in the multi-modal system, which includes running an operating system supporting multi-tasking and includes a central processing unit and Ram for storing

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application program code and data, which reads on “program storage device readable by machine, tangibly embodying a program of instructions executable by the machine.”

Additionally, at col. 3, line 63 continuing to col. 4, line 20, Johnson teaches the system sends the output of a speech recognizer and non-speech input received by a screen manager to a dispatcher. Based on the output of the natural language processor, the dispatcher invokes the application manager to determine which application should process the request, which reads on “presenting a command associated with an application to a dialog manager, the application associated with the command being unknown to the dialog manager.”

Johnson fails to specifically disclose, “the application associated with the command being one of a plurality of active applications.” However, implementation of a computer system, which allows a user to interact with a plurality of simultaneously running applications using natural language, was well known in the art.

In a similar field of endeavor, Cote discloses a system for controlling multiple user application programs by spoken input, which provides a speech recognition program working in conjunction with an operating system which provides multi-tasking capability and provides for implementation of a windowing system which facilitates the direction of user input to the various user application programs which are running (col. 3, lines 12-17; col. 4, lines 36-39).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to allow for the presented command to be associated with one of a plurality of active applications, as suggested by Cote, for the purpose of allowing the user the convenience of accessing the processing of all applications to have a request processed automatically, without the user having to manually access any of the applications.

Johnson fails to specifically disclose “the dialog manager determining current context of the command by reviewing a multi-modal history of events.” However, determining current context of user input responses by reviewing a history of events was well known in the art.

Cote teaches the system maintains a database for the application programs that are running which allows the system to maintain an effective context for the user programs (col. 1, lines 47-49) and the system creates text events which are used to record information about all types of input events or application events (col. 7, line 9 to col. 9, line 53).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to implement determining current context of user input responses by reviewing a history of events as suggested by Cote, for the purpose of providing an improved system for controlling multiple user application programs by spoken input, as also suggested by Cote (col. 1, lines 32-34).

Additionally, at col. 4, lines 29-52, Johnson teaches the application manager determines which application is applicable to the user input, sends a request to a code generator for the application, and generates the application program code interface code required to access the information, which reads on “determining at least one method responsive to the command based on the current context.”

Additionally, at col. 4, lines 48-52, Johnson discloses a response generator that generates a response appropriate to the nature of the request submitted by the user and the current application, which reads on “executing the at least one method responsive to the command associated with the application.”

Additionally, at col. 4, line 17-53 and col. 5, line 23-29, Johnson teaches “changing dialog focus,” because the system ascertains that a different application should process the user request, and utilizes the different application’s resources to process the request, since the procedures to access a new or different application requires the system to access or focus on the new or different application. The system of Johnson performs this processing without requiring the user to perform the task of accessing the application, but the application is indeed accessed and opened to allow for the processing of the user’s request.

Regarding claim 11, the combination of Johnson and Cote teach everything as claimed in claim 10. Additionally, at col. 3, lines 33-42, Johnson teaches the multi-modal interface is linked to the applications and allows for combining input from various modalities, which reads on “employing at least one multi-modal device for presenting the command.”

Regarding claim 12, the combination of Johnson and Cote teaches everything as claimed in claim 11. Additionally, at col. 3, lines 37-42, Johnson discloses the input means can be via speech, typed or handwritten and includes point-and-click, touch and keyboard inputs, which reads on “multi-modal device is a computer.”

Regarding claim 13, the combination of Johnson and Cote teaches everything as claimed in claim 10. Johnson does not specifically teach providing a linked list of all events in the multi-modal history. However, providing a linked history of dialog between a user and a system was well known in the art.

Cote teaches the system creates text events, which are used to record information about all types of input events or application events (col. 7, line 9 to col. 9, line 53), which reads on “linked list of all events.”

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to implement a linked list of events in the multi-modal history, as suggested by Cote, for the purpose of removing the ambiguity of a users input query and for providing an improved system for controlling multiple user application programs by spoken input, as also suggested by Cote (col. 1, lines 32-34).

Regarding claim 14, the combination of Johnson and Cote teach everything as claimed in claim 13. Johnson does not specifically teach events in a multi-modal history include events linked by time, type, transaction, class or dialog focus. However, providing linked history events of a dialog between a user and a natural language system was well known.

Cote teaches the system creates text events, which are used to record information about all types of input events or application events, and the events or records have chronological and/or hierarchical relationships (col. 7, line 9 to col. 9, line 53).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to implement a linked list of events in the multi-modal history, as suggested by Cote, for the purpose of removing the ambiguity of a users input query and for providing an improved system for controlling multiple user application programs by spoken input, as also suggested by Cote (col. 1, lines 32-34).

Regarding claim 15, the combination of Johnson and Cote teach everything as claimed in claim 10. Additionally, at col. 5, line 55 continuing to col. 6, line 19, Johnson teaches referencing a concept/application table in which for a given input the application manager finds all concepts in the representation and determines each application registered with every concept in the representation to create an application set. The semantic representation is sent to the

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applications code generator to allow the application to act on the code and retrieve the requested data, which reads on “referencing all active applications using a component control to determine the at least one method which is appropriate.”

Regarding claim 16, the combination of Johnson and Cote teach everything as claimed in claim 10. Additionally, at col. 6, lines 20-40, Johnson teaches the semantic representation of the users input is sent to the applications code generator to allow the application to act on the code and retrieve the requested data, which reads on “the command is presented in a formal language such that a plurality of human utterances represent an action to be taken.”

Regarding claim 17, the combination of Johnson and Cote teaches everything as claimed in claim 11. Additionally, at col. 3, lines 60-62, Johnson teaches maintaining item in focus information, which reads on “maintaining a current dialog focus.” At col. 5, line 61 continuing to col. 6, line 9, Johnson teaches concept/application table which reads on “a list of expected responses to provide a reference for determining the current context.”

Regarding claim 18, the combination of Johnson and Cote teach everything as claimed in claim 11. Additionally, at col. 4, lines 9-17 and col. 5, lines 9-11, Johnson teaches the natural language processor interacts with the user to clarify missing information or ambiguities, which reads on “querying a user for one of information needed to resolve the current context and information needed to take an appropriate action.

Regarding claim 19, Johnson discloses a multi-modal natural language interface for cross-application tasks which interprets user requests combining natural language input from the user with information selected from a current application and sends the request in the proper form to an appropriate auxiliary application for processing. Additionally, at col. 3, lines 60-62,

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Johnson teaches maintaining item in focus information, which reads on “maintaining a current dialog focus.” At col. 5, line 61 continuing to col. 6, line 9, Johnson teaches concept/application table which reads on “a list of expected responses to provide a reference for determining the current context.”

Johnson fails to specifically disclose, “The application associated with the command being one of a plurality of active applications.” However, implementation of a computer system, which allows a user to interact with a plurality of applications using natural language, was well known in the art.

In a similar field of endeavor, Cote discloses a system for controlling multiple user application programs by spoken input, which provides a speech recognition program working in conjunction with an operating system which provides multi-tasking capability and provides for implementation of a windowing system which facilitates the direction of user input to the various user application programs which are running (col. 3, lines 12-17; col. 4, lines 36-39).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to allow for the presented command to be associated with one of a plurality of active applications, as suggested by Cote, for the purpose of allowing the user the convenience of accessing the processing of all applications to have a request processed automatically, without the user having to manually access any of the applications.

Johnson fails to specifically disclose “the dialog manager determining current context of the command by reviewing a multi-modal history of events.” However, determining current context of user input responses by reviewing a history of events was well known in the art.

Cote teaches the system maintains a database for the application programs that are running which allows the system to maintain an effective context for the user programs (col. 1, lines 47-49) and the system creates text events which are used to record information about all types of input events or application events (col. 7, line 9 to col. 9, line 53).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to implement determining current context of user input responses by reviewing a history of events as suggested by Cote, for the purpose of providing an improved system for controlling multiple user application programs by spoken input, as also suggested by Cote (col. 1, lines 32-34).

Additionally, at col. 4, line 17-53 and col. 5, line 23-29, Johnson teaches “changing dialog focus,” because the system ascertains that a different application should process the user request, and utilizes the different application’s resources to process the request, since the procedures to access a new or different application requires the system to access or focus on the new or different application. The system of Johnson performs this processing without requiring the user to perform the task of accessing the application, but the application is indeed accessed and opened to allow for the processing of the user’s request.

Additionally, at col. 5, line 55 continuing to col. 6, line 19, Johnson teaches referencing a concept/application table in which for a given input the application manager finds all concepts in the representation and determines each application registered with every concept in the representation to create an application set. The semantic representation is sent to the applications code generator to allow the application to act on the code and retrieve the requested data, which reads on “a control component adapted to select at least one method responsive to the commands

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received such that the system applies methods responsive to the commands for an appropriate application.”

Regarding claim 20, the combination of Johnson and Cote teach everything as claimed in claim 19. Additionally, at col. 4, lines 42-44, Johnson teaches the appropriate application is an auxiliary application that is opened in the background.

Regarding claim 21, the combination of Johnson and Cote teach everything as claimed in claim 19. Additionally, at col. 3, lines 37-42, Johnson discloses the input means can be via speech, typed or handwritten and includes point-and-click, touch and keyboard inputs, which reads on “multi-modal device is a computer.”

Regarding claim 22, the combination of Johnson and Cote teach everything as claimed in claim 19. Johnson does not specifically teach providing a linked list of all events in the multi-modal history. However, providing a linked history of dialog between a user and a system was well known in the art.

Cote teaches the system creates text events, which are used to record information about all types of input events or application events (col. 7, line 9 to col. 9, line 53), which reads on “linked list of all events.”

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to implement a linked list of events in the multi-modal history, as suggested by Cote, for the purpose of removing the ambiguity of a users input query and for providing an improved system for controlling multiple user application programs by spoken input, as also suggested by Cote (col. 1, lines 32-34).

Regarding claim 23, the combination of Johnson and Cote teach everything as claimed in claim 22. Johnson does not specifically teach events in a multi-modal history include events linked by time, type, transaction, class or dialog focus. However, providing linked history events of a dialog between a user and a natural language system was well known.

Cote teaches the system creates text events, which are used to record information about all types of input events or application events, and the events or records have chronological and/or hierarchical relationships (col. 7, line 9 to col. 9, line 53).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Johnson to implement a linked list of events in the multi-modal history, as suggested by Cote, for the purpose of removing the ambiguity of a users input query and for providing an improved system for controlling multiple user application programs by spoken input, as also suggested by Cote (col. 1, lines 32-34).

Regarding claim 24, the combination of Johnson and Cote teach everything as claimed in claim 19. Additionally, at col. 5, line 55 continuing to col. 6, line 19, Johnson teaches referencing a concept/application table in which for a given input the application manager finds all concepts in the representation and determines each application registered with every concept in the representation to create an application set. The semantic representation is sent to the applications code generator to allow the application to act on the code and retrieve the requested data, which reads on "referencing all active applications using a component control to determine the at least one method which is appropriate."

Regarding claim 25, the combination of Johnson and Cote teach everything as claimed in claim 24. Additionally, at col. 6, lines 20-40, Johnson teaches the semantic representation of the

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users input is sent to the applications code generator to allow the application to act on the code and retrieve the requested data, which reads on "the command is presented in a formal language such that a plurality of human utterances represent an action to be taken."

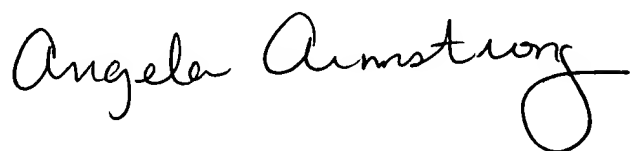
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A Armstrong whose telephone number is 571-272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Angela A Armstrong
Examiner
Art Unit 2654

AAA
May 16, 2005

A handwritten signature in black ink that reads "Angela Armstrong". The signature is written in a cursive style with a large, looping "A" and a long, sweeping "g".